

a<sup>3</sup> ~ There has thus been shown and described a novel method for stabilizing the optical output power of light emitting diodes and laser diodes which fulfills all the objects and advantages sought therefor. Many changes, modifications, variations and other uses and applications of the subject invention will, however, become apparent to those skilled in the art after considering this specification and the accompanying drawings which disclose the preferred embodiments thereof. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention, which is to be limited only by the claims which follow. ~

IN THE CLAIMS:

Before line 1, change "Patent Claims:" to:

~ CLAIMS

What is claimed is: ~

Please amend claims 1-12 as follows:

- a<sup>5</sup> sub B' 1. (Once Amended) [Method] In a method for stabilizing the optical output power (light power) of light emitting diodes and laser diodes, [characterized in that] the improvement wherein the combination of diode current and forward voltage serves as a definite measure for the light power emitted by the [light emitting diode or laser] diode, where it is

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assumed that at a constant light power the forward voltage is a function of the diode current.

CF 2. (Once Amended) [Method] The method as set forth in claim 1, [where] wherein the function that determines the forward voltage from the diode current at a constant light power is determined through measurements at various temperatures and [where the light emitting diode or the laser] wherein the diode is connected such that the resultant functional correlation between diode current and forward voltage is set solely through electrical mechanisms.

CF 3. (Once Amended) [Method] The method as set forth in claim 2, where the forward voltage is measured via an analog/digital interface using a suitable data processing device, and where the diode current is controlled via a digital/analog interface such that the previously determined functional correlation is established between the set diode current and the measured forward voltage.

4. (Once Amended) [Method] The method as set forth in claim 2, [where] wherein it is presumed that the function from which at a constant light power the forward voltage is [deduced] determined from the diode current, is [a] linear [function].

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5. (Once Amended) [Method] The method as set forth in claim 4, [where] wherein in the case of a constant forward voltage at a constant light power and an increasing diode current this correlation is established through the operation of the [light emitting] diode [or laser diode at] using a constant voltage source.

6. (Once Amended) [Method] The method as set forth in claim 4, [where] wherein in the case of a linearly decreasing forward voltage at a constant light power and an increasing diode current this correlation is established through the operation of the [light emitting diode or laser] diode together with a resistor connected in series [at] with a constant voltage source.

7. (Once Amended) [Method] The method as set forth in claim 4, [where] wherein in the case of a linearly increasing forward voltage at a constant light power and an increasing diode current this correlation is established through the operation of the [light emitting diode or laser] diode in a suitable circuit with a negative resistance whose reference input is connected with a constant voltage source.

8. (Once Amended) [Method] A method for stabilizing several similar light emitting [diodes] or laser diodes, [where] wherein one [light emitting diode or laser] diode is

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stabilized using [a] the method [as] set forth in [claims] claim 3, [or 5 to 7] and [where] wherein the remaining [light emitting diodes or laser] diodes are connected in series and operated such that the current flowing through the first light emitting diode or laser diode also flows through the remaining ones.

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9. (Once Amended) [Method] A method for stabilizing several similar light emitting diodes or laser diodes, [where] wherein one [light emitting diode or laser] diode is stabilized using the method [as] set forth in [claims] claim 3, [or 5 to 7] and where the remaining light emitting diodes or laser diodes are operated by one or more voltage sources whose source voltage follows the forward voltage of the first light emitting diode or laser diode.

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10. (Once Amended) [Method] A method for stabilizing several similar light emitting diodes or laser diodes, [where] wherein one [light emitting diode or laser] diode is stabilized using the method [as] set forth in [claims] claim 3, [or 5 to 7,] a first portion of the remaining [light emitting diodes or laser] diodes is connected in series and operated such that current flowing through the first [light emitting diode or laser] diode also flows through the remaining ones of this first portion, a second portion of the remaining [light emitting diodes or laser] diodes is

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operated by one or more voltage sources whose source voltage follows the forward voltage of the first [light emitting diode or laser] diode and [where] wherein additional portions of the [light emitting diode or laser] diode are connected in series and operated such that the currents flowing through the [light emitting diodes or laser] diodes of the second portion flow also through the [remaining] additional portions.

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11. (Once Amended) [Method] A method for determining the forward voltage of a light emitting diode or laser diode [(1)] as a function of the diode current at a constant light power, comprising the steps of: varying [where] the temperature of the [light emitting diode or laser] diode [(1) is varied] using a heating or cooling device; determining [(2,3) and where] the emitted light power [is obtained using] by means of a [photo detector (4)] photodetector; and [maintained] maintaining the emitted light power at a constant level [using] by means of a control device [(5,6,7)] and [where] wherein the values of the forward voltage and the diode current are measured at various temperatures.

12. (Once Amended) [Method] A method for determining the parameters of a linear correlation between the diode current and the forward voltage of a light emitting diode or laser